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GLOSSARY

# **ITW** Polymer Technologies

*Hardener*

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**SECTION 1 : PRODUCT AND COMPANY IDENTIFICATION**

Product Name: **American Safety Tech. MS-7CZ / HARDENER (AST)**  
 MSDS Manufacturer Number: MS790H  
 Manufacturer Name: ITW Polymer Technologies  
 Address: 130 Commerce Drive  
 Montgomeryville, PA 18936  
 General Phone Number: (215) 855-8450  
 Emergency Phone Number: (215) 855-8450  
 CHEMTREC: For emergencies in the US, call CHEMTREC: 800-424-9300  
 MSDS Creation Date: 06/15/2009  
 MSDS Revision Date: 06/10/2012  
 GHS Class: Flammable Liquid, Category 4  
 Eye Irritant, Category 2B  
 Skin Irritant, Category 2  
 Skin Sensitizer, Category 1A  
 Hazardous to the aquatic environment

**HMIS**

Health Hazard	2
Fire Hazard	3
REACTIVITY	1
Personal Protection	X

\* Chronic Health Effects:

**SECTION 2 : COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS#	Ingredient Percent
Polyamidoamine	68443-08-3	5 - 10 by weight
Methyl normal amyl ketone	110-43-0	5 - 10 by weight
Solvent naphtha, petroleum, light aromatic	64742-95-6	5 - 10 by weight
Polyamide	No data	30 - 60 by weight
Amidoamine resin	68443-08-3	1 - 5 by weight
1-methoxy-2-propanol	107-98-2	10 - 30 by weight
1,2,4-trimethylbenzene	95-63-6	1 - 5 by weight

**SECTION 3 : HAZARDS IDENTIFICATION**

Emergency Overview: DANGER! Flammable. Severe Irritant. Harmful.  
 Route of Exposure: Eyes. Skin. Inhalation. Ingestion.  
 Potential Health Effects:  
 Eye: Can cause severe eye irritation and burns. Eye contact may cause permanent damage or blindness.  
 Skin: Causes severe skin irritation. May cause permanent skin damage.  
 Inhalation: Vapor or mist may cause severe respiratory system irritation.  
 Ingestion: Harmful if swallowed May be fatal if swallowed and enters airways Causes irritation, a burning sensation of the mouth, throat and gastrointestinal tract and abdominal pain.  
 Chronic Health Effects: Harmful if inhaled Prolonged or repeated contact may cause skin irritation. May cause cancer  
 Signs/Symptoms: Overexposure may cause headaches and dizziness.  
 Target Organs: Eyes. Skin. Respiratory system. Digestive system.

Aggravation of Pre-Existing Conditions: None generally recognized.

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#### SECTION 4 : FIRST AID MEASURES

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**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention.

**Skin Contact:** Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

**Ingestion:** If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

**Other First Aid:** Due to possible aspiration into the lungs, DO NOT induce vomiting if ingested. Provide a glass of water to dilute the material in the stomach. If vomiting occurs naturally, have the person lean forward to reduce the risk of aspiration.

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#### SECTION 5 : FIRE FIGHTING MEASURES

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**Flammable Properties:** Flammable liquid.

**Flash Point:** 94 °F

**Auto Ignition Temperature:** Not determined.

**Lower Flammable/Explosive Limit:** Not determined.

**Upper Flammable/Explosive Limit:** Not determined.

**Fire Fighting Instructions:** Evacuate area of unprotected personnel. Use cold water spray to cool fire exposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water.

**Extinguishing Media:** Use carbon dioxide (CO<sub>2</sub>) or dry chemical when fighting fires involving this material.

**Protective Equipment:** As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.

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#### SECTION 6 : ACCIDENTAL RELEASE MEASURES

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**Personnel Precautions:** Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.

**Environmental Precautions:** Avoid runoff into storm sewers, ditches, and waterways.

**Spill Cleanup Measures:** Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Provide ventilation. Collect spill with a non-sparking tool. Place into a suitable container for disposal. Clean up spills immediately observing precautions in the protective equipment section. After removal, flush spill area with soap and water to remove trace residue. Flammable, eliminate ignition sources. Vapors can form an ignitable mixture with air. Vapors can flow along surfaces to distant ignition sources and flash back. Ventilate area. Use proper personal protective equipment as listed in section 8.

**Other Precautions:** Pump or shovel to storage/salvage vessels.

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#### SECTION 7 : HANDLING and STORAGE

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**Handling:** Use with adequate ventilation. Avoid breathing vapor, aerosol or mist. Material will accumulate static charges which may cause an electrical spark (ignition source). Use proper grounding procedures. Do not reuse containers without proper cleaning or reconditioning.

**Storage:** Store in a cool, dry, well ventilated area away from sources of heat, combustible materials, direct sunlight, and incompatible substances. Keep container tightly closed when not in use. Do not store in reactive metal containers. Keep away from acids, oxidizers.

**Special Handling Procedures:** Provide appropriate ventilation/respiratory protection against decomposition products (see Section 10) during welding/flame cutting operations and to protect against dust during sanding/grinding of cured product. Hazardous liquid or vapor

residue may remain in emptied container. Do not reuse, heat, burn, pressurize, cut, weld, braze, solder, drill, grind, expose to sparks, flame, or ignition sources of empty containers without proper commercial cleaning or reconditioning.

Hygiene Practices: Wash thoroughly after handling.

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## SECTION 8 : EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES

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**Engineering Controls:** Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.

**Eye/Face Protection:** Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.

**Skin Protection Description:** Wear appropriate protective gloves and other protective apparel to prevent skin contact. Consult manufacturer's data for permeability data.

**Respiratory Protection:** A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

**Other Protective:** Facilities storing or utilizing this material should be equipped with an eyewash and a deluge shower safety station.

### EXPOSURE GUIDELINES

#### **Methyl normal amyl ketone :**

Guideline ACGIH: 50 ppm  
TLV-TWA: 50 ppm

Guideline OSHA: 100 ppm  
PEL-TWA: 100 ppm

#### **1-methoxy-2-propanol :**

Guideline ACGIH: 100 ppm  
TLV-STEL: 150 ppm  
TLV-TWA: 100 ppm

#### **1,2,4-trimethylbenzene :**

Guideline ACGIH: 25 ppm  
TLV-TWA: 25 ppm

Notes : Only established PEL and TLV values for the ingredients are listed.

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## SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES

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**Physical State Appearance:** Liquid.

**Color:** Amber.

**Boiling Point:** 248°F

**Melting Point:** Not determined.

**Vapor Density:** 3.12

**Vapor Pressure:** 12.5 mmHg

**Evaporation Rate:** 0.83

**pH:** Not determined.

**Molecular Formula:** Mixture

**Molecular Weight:** Mixture

**Flash Point:** 94 °F

**Auto Ignition Temperature:** Not determined.

**VOC Content:** 2 lbs/gal (250 g/l)

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## SECTION 10 : STABILITY and REACTIVITY

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**Chemical Stability:** Stable under normal temperatures and pressures.

Hazardous Polymerization: Not reported.  
 Conditions to Avoid: Extreme heat, sparks, and open flame. Incompatible materials, oxidizers and oxidizing conditions.  
 Incompatible Materials: Oxidizing agents. Strong acids and alkalis.

## SECTION 11 : TOXICOLOGICAL INFORMATION

### **Methyl normal amyl ketone :**

RTECS Number: MJ5075000  
 Skin: Administration onto the skin - Rabbit LD50: 12600 uL/kg [Details of toxic effects not reported other than lethal dose value]  
 Administration onto the skin - Rabbit Open irritation test: 14 mg/24H (RTECS)  
 Ingestion: Oral - Rat LD50: 1670 mg/kg [Details of toxic effects not reported other than lethal dose value]  
 Oral - Mouse LD50: 730 mg/kg [Details of toxic effects not reported other than lethal dose value]  
 Oral - Rat LD50: 1600 mg/kg [Behavioral - Ataxia Lungs, Thorax, or Respiration - Respiratory depression] (RTECS)

### **Solvent naphtha, petroleum, light aromatic :**

RTECS Number: WF3400000  
 Eye: Eye - Rabbit Standard Draize test.: 100 uL/24H [mild] (RTECS)  
 Ingestion: Oral - Rat LD50: 8400 mg/kg [Behavioral - Somnolence (general depressed activity) Behavioral - Tremor Lungs, Thorax, or Respiration - Other changes]  
 Oral - LD50: >2150 mg/kg [Behavioral - Food intake (animal) Nutritional and Gross Metabolic - Weight loss or decreased weight gain] (RTECS)

### **1-methoxy-2-propanol :**

RTECS Number: UB7700000  
 Eye: Eye - Rabbit Standard Draize test.: 500 mg/24H (RTECS)  
 Skin: Administration onto the skin - Rabbit LD50: 13 gm/kg [Details of toxic effects not reported other than lethal dose value]  
 Administration onto the skin - Rabbit Open irritation test: 500 mg (RTECS)  
 Inhalation: Inhalation - Rat LC50: 10000 ppm/5H [Details of toxic effects not reported other than lethal dose value] (RTECS)  
 Ingestion: Oral - Rat LD50: 6600 mg/kg [Brain and Coverings - Other degenerative changes Behavioral - General anesthetic Lungs, Thorax, or Respiration - Dyspnea]  
 Oral - Mouse LD50: 11700 mg/kg [Behavioral - Convulsions or effect on seizure threshold Behavioral - Ataxia Lungs, Thorax, or Respiration - Dyspnea]  
 Oral - LD50: 5 gm/kg [Details of toxic effects not reported other than lethal dose value]  
 Oral - Rabbit LD50: 5700 mg/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

### **1,2,4-trimethylbenzene :**

RTECS Number: DC3325000  
 Inhalation: Inhalation - Rat LC50: 18000 mg/m<sup>3</sup>/4H [Details of toxic effects not reported other than lethal dose value] (RTECS)  
 Ingestion: Oral - Rat LD50: 5 gm/kg [Details of toxic effects not reported other than lethal dose value]  
 Oral - Mouse LD50: 6900 mg/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

## SECTION 12 : ECOLOGICAL INFORMATION

Ecotoxicity: No ecotoxicity data was found for the product.  
 Environmental Fate: No environmental information found for this product.

## SECTION 13 : DISPOSAL CONSIDERATIONS

Waste Disposal: Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines.  
 RCRA Number: D001

Important Disposal Information: DANGER! Rags, steel wool and waste soaked with this product may spontaneously catch fire if improperly discarded or stored. To avoid a spontaneous combustion fire, immediately after use, place rags, steel wool or waste in a sealed, water-filled, metal container.

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#### SECTION 14 : TRANSPORT INFORMATION

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DOT Shipping Name: Paint  
 DOT UN Number: UN1263  
 DOT Hazard Class: 3  
 DOT Packing Group: III

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#### SECTION 15 : REGULATORY INFORMATION

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##### **Polyamidoamine :**

TSCA Inventory Status: Listed  
 Canada DSL: Listed

##### **Methyl normal amyl ketone :**

TSCA Inventory Status: Listed  
 Massachusetts: Listed: Massachusetts Oil and Hazardous List  
 Pennsylvania: Listed  
 Canada DSL: Listed

##### **Solvent naphtha, petroleum, light aromatic :**

TSCA Inventory Status: Listed  
 Canada DSL: Listed

##### **Amidoamine resin :**

TSCA Inventory Status: Listed  
 Canada DSL: Listed

##### **1-methoxy-2-propanol :**

TSCA Inventory Status: Listed  
 Massachusetts: Listed: Massachusetts Oil and Hazardous List  
 Pennsylvania: Listed  
 Canada DSL: Listed

##### **1,2,4-trimethylbenzene :**

TSCA Inventory Status: Listed  
 SARA: EPCRA - 40 CFR Part 372 - (SARA Title III) Section 313 Listed Chemical.  
 New Jersey: Listed: NJ Hazardous List; Substance Number: 2716  
 Massachusetts: Listed: Massachusetts Oil and Hazardous List  
 Pennsylvania: Listed  
 Canada DSL: Listed  
 Risk Phrases: R10 - Flammable.; R22 - Harmful if swallowed.; R36/37/38 - Irritating to eyes, respiratory system and skin.  
 Safety Phrase: S16 - Keep away from sources of ignition - No smoking.; S51 - Use only in well ventilated areas.; S37/39 - Wear suitable gloves and eye/face protection.; S24/25 - Avoid contact with skin and eyes.  
 Canadian Regulations: WHMIS Hazard Class(es): B2, D2A  
 All components of this product are on the Canadian Domestic Substances List.

##### **WHMIS Pictograms**




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#### SECTION 16 : ADDITIONAL INFORMATION

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Label Hazard Warning: Flammable liquid and vapour  
 May be fatal if swallowed and enters airways  
 Harmful if swallowed

Harmful if Inhaled  
Causes skin Irritation  
May cause respiratory irritation  
Causes serious eye irritation  
Toxic to aquatic life with long lasting effects  
May cause cancer

HMIS Fire Hazard: 3  
HMIS Health Hazard: 2  
HMIS Reactivity: 1  
HMIS Personal Protection: X  
MSDS Creation Date: 06/15/2009  
MSDS Revision Date: 06/10/2012  
MSDS Author: Actio Corporation

Disclaimer: The Information given in the Data Sheet is designed only as a guidance for safe handling, storage and the use of the substance. It is not a specification nor does it guarantee any specific properties. All chemicals should be handled only by competent personnel, within a controlled environment.

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